

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-33. (Canceled).

34. (Previously Presented) A method of anisotropic plasma etching a laterally defined structure in a silicon substrate using a process gas, the method comprising the steps of:
precipitating at least one passivating material on at least a side wall of the laterally defined structure at least one of prior to the anisotropic plasma etching and during the anisotropic plasma etching;

adding at least one fluorine-delivering etching gas to the process gas, the at least one fluorine-delivering etching gas including at least one compound selected from the group consisting of ClF_3 , BrF_3 and IF_5 ;

adding NF_3 to the process gas as an additive for consuming the at least one passivating material; and

adding a light, easily ionizable gas to the process gas to at least one of improve selectivity, reduce charging effects, increase separation between light ions and heavy ions, and reduce or suppress stray trench fields;

wherein a frequency of a substrate voltage is less than about 2 MHz, so that lighter ions can follow a variation of the electrical field more easily due to their lower inertia.

35. (Previously Presented) The method of claim 34, further comprising the step of adding at least one gas selected from the group consisting of SiF_4 , C_4F_8 , C_3F_6 , C_4F_{10} , C_3F_8 and C_2F_6 to the process gas as the gas forming the at least one passivating material.

36. (Previously Presented) The method of claim 34, further comprising the step of adding at least one gas selected from the group consisting of O_2 , N_2O , NO , NO_x , CO_2 , and NO_2 to the process gas.

37. -38. (Canceled)

39. (Canceled).

40. (Previously Presented) The method of claim 34, wherein the light, easily ionizable gas includes at least one of H₂, He and Ne.